



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,018	06/24/2003	Abraham Paulus Houweling	AME0102 US	7662

7590 10/25/2004

Lance A. Turlock
Meridian Patent Services
#471-7231-120th Street
Delta, BC V4C 6P5
CANADA

EXAMINER

VALENTI, ANDREA M

ART UNIT	PAPER NUMBER
----------	--------------

3643

DATE MAILED: 10/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,018

Applicant(s)

HOUWELING, ABRAHAM PAULU

Examiner

Andrea M. Valenti

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) 9-18 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-8 in the reply filed on 10 August 2004 is acknowledged.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the second paragraph contains legal phraseology "means". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,837,971 to Visser in view of U.S. Patent No. 3,824,736 to Davis and U.S. Patent No. 4,312,152 to Drury et al.

Regarding Claim 1, Visser teaches an apparatus comprising: a greenhouse for providing a first environmental zone for nurturing plants, said first zone being located in said greenhouse in a region positioned to receive substantial amounts of sunlight, a plant warehouse for providing a second environmental zone for nurturing plants, transport rails extending from within said first environmental zone to within said second environmental zone (Visser abstract (Treatment area and growing area); Col. 2 line 8-9; and Col. 2 line 30-31).

Visser teaches two zones and that the plants are conveyed between two zones, but Visser is silent on said second zone being located in a region substantially sheltered from sunlight. However, Davis teaches that it would have been obvious to modify the teachings of Visser with the teachings of Davis at the time of the invention for the advantage of the enhance growth development for certain plant varieties to have spend time in lighted and dark conditions.

Visser as modified teaches a plurality of trays each adapted to ride on said rails between said environmental zones while carrying said plants, but does not explicitly teach ebb and flood trays, each adapted to carry plants in the flood region of the tray. However, Drury teaches ebb and flood trays moveably positioned on rails (Drury Fig. 1 #11). It would have been obvious to modify the teachings of Visser at the time of the

Art Unit: 3643

invention for the added advantage of hydroponic cultivation as taught by Drury (Drury abstract).

Regarding Claim 2, Visser as modified teaches means for releasably coupling said trays in succession for movement along said rails as a train of trays (Visser #7, 8, 9).

Regarding Claim 3, Visser as modified teaches couplers (Visser #7) for releasably coupling said trays in succession for movement along said rails as a train of trays.

Regarding Claim 4, Visser as modified teaches the rails comprise: a first pair of rails on a first level; and, a second pair of rails on a second level, said second pair of rails being positioned above said first pair of rails (Visser Fig. 2 and abstract).

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,824,736 to Davis in view of U.S. Patent No. 4,312,152 to Drury et al.

Regarding Claim 5, Davis teaches a method of handling and controlling the nurturing of plants in a tray, said method comprising the steps of: maintaining first and second environmental zones for nurturing plants (Davis #42, 40, and 22), the first of said zones being located in a structure in a region positioned to receive substantial amounts of sunlight (Davis #40), the second of said zones being located in a structure in a region substantially sheltered from sunlight (Davis #42); maintaining transport rails extending from within said first environmental zone to within said second environmental zone (Davis #47); adapting said tray (Davis #46) for riding movement on said rails (Davis

Art Unit: 3643

Fig. 2); positioning said tray on said rails for such movement, carrying said plants with said tray; at a first time, and if a first prescribed condition is satisfied, moving said tray with said plants along said rails from within said first environmental zone to within said second environmental zone; at a subsequent time, and if a second prescribed condition is satisfied, moving said tray with said plants along said rails from within said second environmental zone to within said first environmental zone; and, repeating steps at succession of times (Davis Fig. 3).

Davis is silent on the tray being an ebb and flood tray. However, Drury teaches a method of handling and controlling nurturing of plants in an ebb and flood tray moveably located on rails (Drury Fig. 1 #11). It would have been obvious to one of ordinary skill in the art to modify the tray of Davis with the ebb and flood feature of Drury at the time the invention was made for the advantage of hydroponic cultivation means (Drury abstract).

Regarding Claim 6, Davis as modified teaches said structure in which said first environmental zone is located comprises a greenhouse (Davis #40); and, said structure in which said second environmental zone is located comprises a plant warehouse (Davis Fig. 2 and 3 #42 and 22).

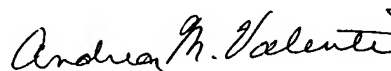
Regarding Claims 7 and 8, Davis as modified teaches flooding said tray with a plant nurturing fluid at selected times at a station located along said rails; and, then draining said fluid from said tray at said station (Drury Fig. 1 #26, 29, and 30).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

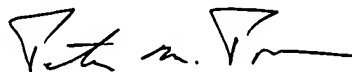
Japanese Patent JP 041797113; U.S. Patent No. 4,583,321; U.S. Patent No. 6,374,537; U.S. Patent No. 4,352,256; U.S. Patent No. 4,603,506; U.S. Patent No. 4,793,096.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea M. Valenti whose telephone number is 703-305-3010. The examiner can normally be reached on 7:30am-5pm M-F; Alternating Fridays Off. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 703-308-2574. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrea M. Valenti
Patent Examiner
Art Unit 3643

12 October 2004



Peter M. Poon
Supervisory Patent Examiner
Technology Center 3600